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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,823	05/03/2001	Francisco A. Uribe	S-94.613	7902

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UNIVERSITY OF CALIFORNIA
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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,823

Applicant(s)

URIBE ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 10, 2003 has been entered. Claims 1-4 are addressed herein and are all newly rejected under 35 USC §103.

Remarks

2. Applicant's argument with respect to the Junji et al. reference (JP 8-188733) is persuasive and the rejection over this reference has been withdrawn. Applicants state that independent claim 1 recites that "the layer of oxidation catalyst consists essentially of a non-precious metal oxidation catalyst selected from the group consisting of Cu, Fe, Co, Tb, W, Mo, Sn, and oxides thereof," thus excluding MnO₂ from the oxidation catalyst layer. As is apparent from the disclosure of the Junji et al. reference, manganese oxide materially alters the basic and novel characteristics of the catalyst layer, and is thus excluded by the "consisting essentially of" claim language. See MPEP §2111.03.

Additionally, it is noted that Applicants claim domestic priority from U.S. application serial no. 09/216,313, filed on December 18, 1998. However, the instant claims are not believed

to be supported by this application since it does not disclose the instantly claimed catalyst materials. Accordingly, the instant claims are accorded a filing date of May 3, 2001 (the filing date of the instant application). See MPEP §201.11(VI).

Claim Rejections - 35 USC § 103

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (JP 8-203537) in view of JP 2000-262899.

Regarding claim 1, Uchida et al. teach a fuel cell comprising a polymer electrolyte membrane (2) having an electrocatalytic surface thereon in Figure 2. A porous anode backing comprising carbon particles (4; the white particles in Fig. 2(A)) abuts the electrolyte membrane at a first surface thereof. A CO oxidation catalyst layer (12) is present on the second surface of the anode backing (see claim 4 and Fig. 2 of the reference). Regarding claims 2 and 3, the electrocatalyst (5) is Pt or Pt/Ru alloy (see claim 3 and Example 1 of the reference). Regarding claim 1, in Example 1, the reference discloses that the electrocatalytic surface is formed by mixing the electrocatalyst with the polymer of the polymer electrolyte membrane, and then bonding it on an anode side of the membrane. Regarding claim 4, the layer of oxidation catalyst includes carbon (4), which is a hydrophobic material.

Uchida et al. do not expressly teach that the CO oxidation catalyst consists essentially of a non-precious metal selected from the group consisting of Cu, Fe, Co, Tb, W, Mo, Sn, or an oxide thereof, as recited in claim 1.

In the abstract, JP 2000-262899 teaches a CO oxidation catalyst for removing CO from a reformed gas stream. The catalyst may consist of elemental Cu, Mo, W, Fe, Co, or an oxide thereof.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of JP '899 to use a catalyst consisting of Cu, Mo, W, Fe, Co, or an oxide thereof in the CO oxidation catalyst layer of Uchida et al. In the abstract, JP '899 teaches that the catalyst is "capable of efficiently removing only CO in hydrogen rich gas bringing about the electrode poisoning of a fuel cell and a CO selectively removing method using the same." Accordingly, the artisan would be motivated to use a catalyst consisting of Cu, Mo, W, Fe, Co, or an oxide thereof in the CO oxidation catalyst layer of Uchida et al. Furthermore, the disclosure of JP '899 indicates that the Cu, Mo, W, Fe, and Co are suitable materials for use as CO oxidation catalysts. The selection of a known material based on its suitability for its intended use has been held to be *prima facie* obvious. See MPEP §2144.07.

Regarding the recitation in claim 1 that the fuel cell is "usable in a reformat fuel stream containing diluted hydrogen fuel with CO as an impurity and with added air," this limitation recites an intended use and does not have to be accorded patentable weight, pursuant to MPEP §2111.02. If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

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Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (703) 305-0051. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (703) 308-4333. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900. Additionally, documents may be faxed to (703) 305-5408 or (703) 305-5433.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JSC

April 29, 2003



Jonathan Crepeau
Patent Examiner
Art Unit 1746